



September 12, 2006

Cobb County...Expect the Best!

Cobb County Monument Project

Cobb County has implemented a countywide survey control network. The program began in 1997 as a joint effort between Cobb County Storm Water and Cobb County DOT as Cobb County Storm Water was developing a basis for an inventory of storm drainage structures and wanted a method to tie all the structure data together on a common datum. Brass disks connected to a No. 4 rebar were set in concrete that is approximately three feet deep. Witness posts were set approximately (3) feet behind the monuments. There are some 120 pairs or so of monuments in the county, however, not all monuments have values established on them yet.

Specifications were developed for the establishment of values on the monuments using GPS methodology. The specifications followed recommendations found in NGS specifications for the most part. The data on the disks were collected using static GPS methods and then reduced. The data was established by tying into HARN monuments, first order NGS stations and some NGS second order stations outside of Cobb County along with stations in Cobb County. The horizontal datum is NAD 1983 and 1994 HARN adjustment and the vertical datum is NAVD 1988 and 1994 HARN adjustment and based on the 1996 Geoid. All data is in the Georgia State Plane Coordinate System, West Zone, NAD83.

In 2004 Cobb County established three (3) Continuously Operating Reference Stations (CORS) and Cobb County was the first National Geodetic Survey (NGS) Cooperative CORS in the State of Georgia. The values for the CORS stations were provided to Cobb County by NGS.

With the establishment of the CORS stations, many monuments previously without values have had values established on them by utilizing the CORS stations and these are so indicated in the Access Database Forms by statements to this fact.

The values on the original monuments were not recomputed to the CORS stations.

In conjunction with Cobb County Storm Water hydrology studies, additional disks were set on culverts and bridges over streams and in curbs and sidewalks near streams beginning in 2002. Values for some of these monuments were established by a consultant utilizing existing monuments via RTK methods. Monuments in the Benchmark database established by this method are so noted and those having values established utilizing the CORS stations are so noted in the corresponding Benchmark Database file.

The monuments for the most part are designated with a numbering system. For example, a monument with the number 010071-1 is located in Land District 1, land lot 71 and the 1 is the number of the monument within that land lot. Another example is 170642-2. This monument is located in Land District 17, land lot 642, and is the second monument within that land lot. The information for these monuments will be found in the Access file named Monuments.





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Monuments on culverts and bridges and near streams use the same style designation except that the letters BM are in front of the numbers. Thus one of these disks would be BM171020-1. The information for these monuments will be found in the Access file named Benchmarks.

The data file is in Microsoft's Access 2000 data file format. The file must be unzipped first and you must use Microsoft's Access 2000 or later software to view and retrieve the data. The form view has a sketch showing the location and ties to permanent objects near the monument. The above numbering format was used for ease in locating the monuments and for being able to use the find query in Access as there are two digit land districts and four digit land lots and some land districts there is more than one monument. In Access form view, the monument number must be highlighted, the find (binocular icon) clicked on and opened and the number typed in as 01007-1 and click on find next and the software should go right to the monument you need.

The other file is an ACAD R12 map of the county with roads and road names, land lots and their numbers, and the monument names on the map. The file will need to be unzipped and it can be opened with ACAD release 12 or later and also in any Microstation product that can import ACAD R12 drawings or later ACAD versions.

I have also included a PDF version of these files. However, in the PDF version, you will not have the form view of the monuments that has the sketch with ties. I have included the ACAD map with these files as well.

Recommended usage: A field survey should tie between two or three different monuments (should be a monument of other pairs, not their mates) and a check made before surveying for any design or construction or other activities take place.

NOTE: THERE ARE BRASS DISKS IN PLACE ON BRIDGES AND CULVERTS OVER STREAMS AND IN OTHER LOCATIONS NEAR STREAMS THAT WERE PUT IN DURING SOME AVAILABLE TIME. A FEW OF THESE BENCHMARK MONUMENTS ARE STILL WITHOUT VALUES AT PRESENT AND WHEN TIME ALLOWS, VALUES WILL BE ESTABLISHED FOR THESE REMAINING BENCHMARK MONUMENTS. THERE IS NOT A TIME LINE SET UP AS TO WHEN DATA VALUES WILL BE ESTABLISHED FOR THESE DISKS.

THERE ARE ALSO SOME PAIRS OF MONUMENTS IN THE GROUND THAT DO NOT HAVE DATA AVAILABLE ON THEM AT PRESENT EITHER. SOME MONUMENTS HAVE HAD VALUES ESTABLISHED ON THEM AND THEY ARE INCLUDED IN THE CURRENT DATABASE. WHEN TIME ALLOWS, VALUES WILL BE ESTABLISHED FOR THESE REMAINING MONUMENTS. THERE IS NOT A TIME LINE SET UP AS TO WHEN DATA VALUES WILL BE ESTABLISHED FOR THESE EITHER.





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Data Description

Access 2000 data file with state plane coordinates, geographic coordinates, orthometric heights, ellipsoid heights, geoid separation, convergence angle, combined scale factor, and a sketch showing the location of the monument and ties to existing features from the monument.

AutoCAD R12 drawing showing the location of the monuments within the county and the monument number. The drawing shows land districts, land lots and numbers, roads, and road names.

